High-Definition IR Water-Proof Bullet Camera

User Manual

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact the dealer.

This manual applies to AAC-2022TI bullet camera.

This manual may contain several technical incorrect places or printing errors, and the content is subject to change without notice. The updates will be added to the new version of this manual. We will readily improve or update the products or procedures described in the manual.

DISCLAIMER STATEMENT

"Underwriters Laboratories Inc. ("UL") has not tested the performance or reliability of the security or signaling aspects of this product. UL has only tested for fire, shock or casualty hazards as outlined in UL's Standard(s) for Safety, UL60950-1. UL Certification does not cover the performance or reliability of the security or signaling aspects of this product. UL MAKES NO REPRESENTATIONS, WARRANTIES OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY OR SIGNALING RELATED FUNCTIONS OF THIS PRODUCT."

Regulatory Information

FCC Information

FCC compliance: This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation

EU Conformity Statement

CE This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC.

2002/96/EC (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

Safety Warnings and Cautions

Please pay attention to the following warnings and cautions:

Hazardous Voltage may be present: Special measures and precautions must be taken when using this device. Some potentials (voltages) on the device may present a hazard to the user. This device should only be used by Employees from our company with knowledge and training in working with these types of devices that contain live circuits.

Caution
The power supply in this product contains no user-serviceable parts. Refer servicing only to qualified personel.

Power Supply Hazardous Voltage: AC mains voltages are present within the power supply assembly. This device must be connected to a UL approved, completely enclosed power supply, of the proper rated voltage and current. No user serviceable parts inside the power supply.

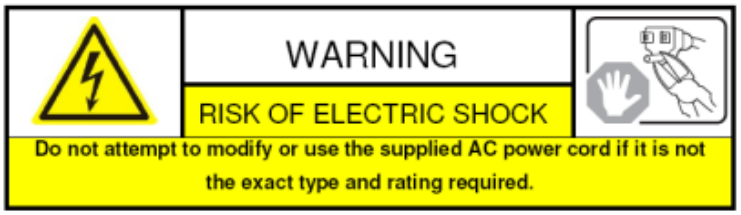
WARNING
RISK OF ELECTRIC SHOCK
Connect only to a properly earth grounded outlet.
Apparaten skall anslutas till jordat uttag när den ansluts till ett nätverk.

System Grounding (Earthing): To avoid shock, ensure that all AC wiring is not exposed and that the earth grounding is maintained. Ensure that any equipment to which this device will be

attached is also connected to properly wired grounded receptacles and are approved medical devices.

Power Connect and Disconnect: The AC power supply cord is the main disconnect device to mains (AC power).The socket outlet shall be installed near the equipment and shall be readily accessible.

Installation and Maintenance: Do not connect/disconnect any cables to or perform installation/maintenance on this device during an electrical storm.


WARNING
RISK OF ELECTRIC SHOCK
Do not attempt to modify or use the supplied AC power cord if it is not the exact type and rating required.

Power Cord Requirements: The connector that plugs into the wall outlet must be a grounding-type male plug designed for use in your region. It must have certification marks showing certification by an agency in your region. The connector that plugs into the AC receptacle on the power supply must be an IEC 320, sheet C13, female connector. See the following website for more information http://kropla.com/electric2.htm.

Lithium Battery: This device contains a Lithium Battery. There is a risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the vendor's instructions and in accordance with local environmental regulations.

Perchlorate Material: Special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate. This notice is required by California Code of Regulations, Title 22, Division 4.5, Chapter 33: Best Management Practices for Perchlorate Materials. This device includes a battery which contains perchlorate material.

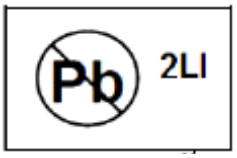
Taiwan battery recycling:

Please recycle batteries.

Thermal and Mechanical Injury: Some components such as heat sinks, power regulators, and processors may be hot; care should be taken to avoid contact with these components.

Electro Magnetic Interference: This equipment has not been tested for compliance with emissions limits of FCC and similar international regulations. This device is not, and may not be, offered for sale or lease, or sold, or leased until authorization from the United States FCC or its equivalent in other countries has been obtained. Use of this equipment in a residential location is prohibited. This equipment generates, uses and can radiate radio frequency energy which may result in harmful interference to radio communications. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is required to take measures to eliminate the interference or discontinue the use of this equipment.

Lead Content:



Please recycle this device in a responsible manner. Refer to local environmental regulations for proper recycling; do not dispose of device in unsorted municipal waste.

Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into "Warnings" and "Cautions"

Warnings: Serious injury or death may occur if any of the warnings are neglected.

Cautions: Injury or equipment damage may occur if any of the cautions are neglected.

Warnings Follow these safeguards to prevent serious injury or death.	**Cautions** Follow these precautions to prevent potential injury or material damage.

Warnings

- Please adopt the power adapter which can meet the safety extra low voltage (SELV) request. And source with DC 12V or AC 24V (depending on models) according to the IEC60950-1 and Limited Power Source standard.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any

responsibility for problems caused by unauthorized repair or maintenance.)

- To reduce the risk of fire or electrical shock, do not expose this product to rain or moisture.
- This installation should be made by a qualified service person and should conform to all local codes.
- Please install blackouts equipment into the power supply circuit for convenient supply interruption.
- Please make sure that the ceiling can support more than 50(N) Newton gravities if the camera is fixed to the ceiling.

Cautions

- Make sure the power supply voltage is correct before using the camera.
- Do not drop the camera or subject it to physical shock.
- Do not touch sensor modules with fingers. If cleaning is necessary, use a clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period of time, put on the lens cap to protect the sensor from dirt.
- Do not aim the camera at the sun or extra bright places. A blooming or smear may occur otherwise (which is not a malfunction however), and affecting the endurance of sensor at the same time.

- The sensor may be burned out by a laser beam, so when any laser equipment is being used, make sure that the surface of the sensor will not be exposed to the laser beam.
- Do not place the camera in extremely hot or cold temperatures (the operating temperature should be between -40°C ~ 60°C, dusty or damp locations, and do not expose it to high electromagnetic radiation.
- To avoid heat accumulation, good ventilation is required for a proper operating environment.
- Do not let water and any liquid flow into the camera.
- While shipping, the camera should be packed in its original packing, or packing of the same texture.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

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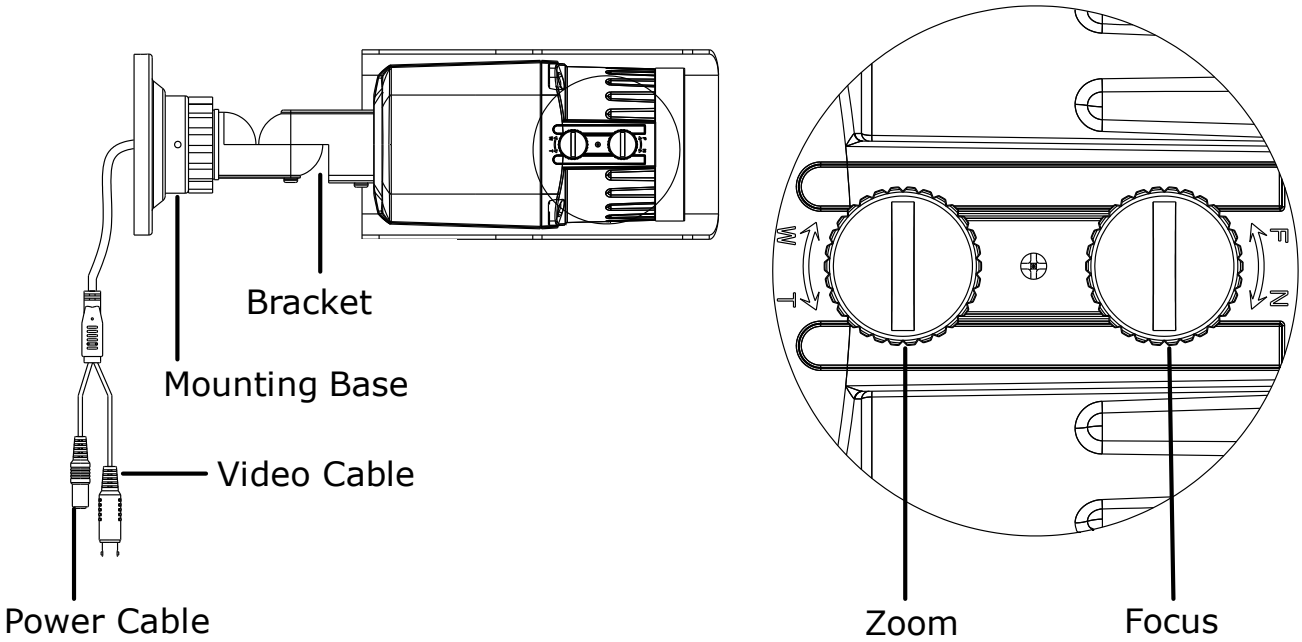
1 Introduction

1.1 Product Features

This camera adopts a high-sensitivity sensor and advanced circuit design technology. It is possessed of high resolution, low image distortion and low noise features, which are suitable for supervisory system and image processing system.

- Adopt high-performance sensor, and with a high resolution which brings high-quality images.
- High color rendition with Auto White Balance function.
- High S/N ratio which makes the image is vivid and clear.
- Support Auto Electronic Shutter control to adapt to different environments.
- Support auto gain control to adapt to changing light conditions.
- Support Backlight Compensation (BLC), which can adjust the iris so that the object in the sensitive area is properly exposed.
- Bullet camera adopts an advanced product design and the mounts of them support wiring out from inside.
- Adopt unique two-shell design which can ensure the senor has a proper temperature to get a high quality image.
- Ingress Protection level reaches IP66.

1.2 Product Appearances



Three-Axis Adjustment: the pan axis range is 0~360°, tilt axis range is 0~75°, and the rotation axis range is 0~360°.

2 Installation

2.1 Installation

Before you start:

When mounting the camera, for the cement wall, you need to mount the base with expansion screws. For the wooden wall, you need to mount the base with self-tapping screws. Please ensure that the wall is strong enough to withstand more than 3 times the weight of the camera and the bracket. If the wall is not strong enough, the camera may fall and cause serious damage.

Note: Before any operation, please make sure that the device in the package is in good condition and all the assembly parts are completed.

This series of bullet camera is equipped with installation bracket, and usually wall installation is preferred, here we will take wall installation as an example to explain how to install the device.

Steps:

1. Drill the holes on the wall with the supplied drilling template.
2. Route the cables inside the ceiling or on the surface. If you want to route the cables inside the ceiling, drill the cable hole in the ceiling for wiring; pull all cables through the hole and terminate all wires (if not yet terminated).
3. Connect the power cable and video cable and secure the mounting base with camera to the wall with supplied screws.

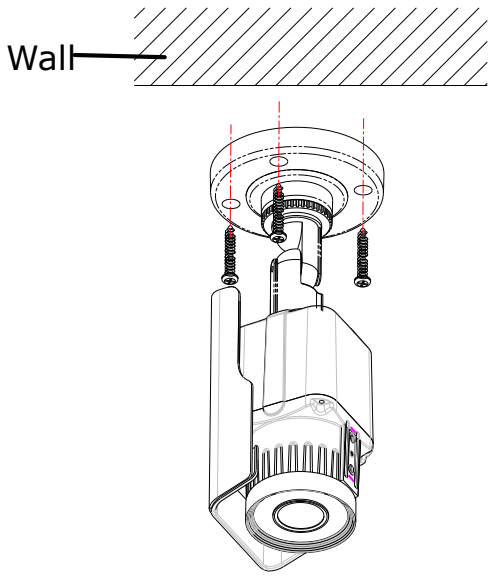


Figure 1-1 Secure the Camera

4. Three-axis adjustment.
   1). Preview the image of the camera on a monitor.

Note: You must loosen the lock screw or fixed ring before adjustment and tighten it when you adjusted it.

2). Rotate the panning table to adjust the panning position of the camera. The adjustable range is from 0 degree to 360 degrees.

3). Rotate the tilting table to adjust the tilting position of the camera. The adjustable range is from 0 degree to 75 degrees.

4). Rotate the lens to adjust the azimuth angle of the image. The adjustable range is from 0 degree to 360 degrees.

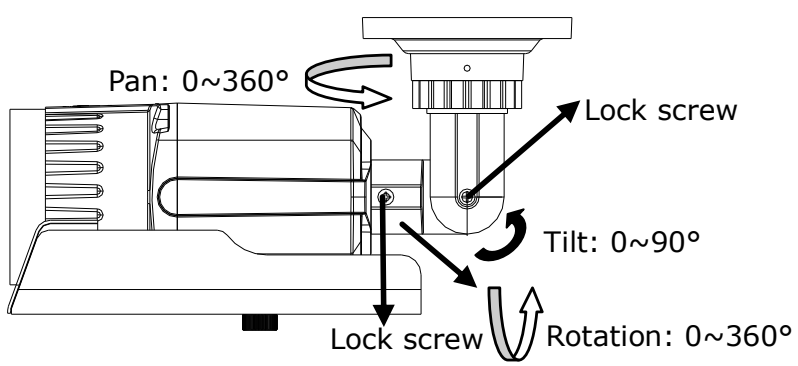


Figure 2-1 Adjusting the Azimuth Angle

5. To focus and zoom, adjust the FOCUS and ZOOM screws on the camera to get a clear image.

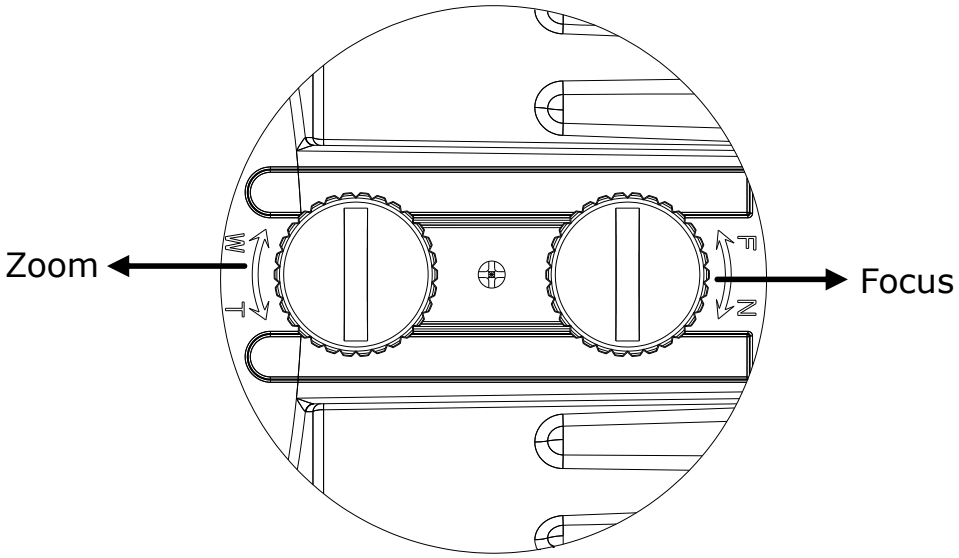


Figure 2-2 Adjusting the Lens